Notes from Breast Milk Call 7/17/2009

Need to work toward harmonization of input parameters for models so that we can run some simulations for the poster in October (and eventually publications in journals)

Input parameters discussed in call:

Body Weight- Yang model uses 64 kg and risk assessment model uses 66 Kg.
Decision: All models will use 64 Kg

Which PCB to use for initial simulations?
Decision: PCB-153

What half life should we use for PCB-153?
Decision: 27 years based on Haddad model and literature
Note: The risk assessment model had assumed steady state based on a 7-year half life. Adoption of the new 27 year half-life will require adjustment to the risk assessment model which the Oregon group will work on before the next call.

What percentage body fat for women should we use for women?- Risk Assessment model used 30%, but Yang and Haddad were both closer to 22%.
Decision: use 22%

What percentage milk-fat should we use?
Decision: Oregon group will read references sent by Marcia Bailey and Sami Haddad and make a decision. Preliminarily we were leaning towards 4%.
Note: For the PBPK models this value changes with time while the risk assessment model uses one number that is assumed to be stable after a the first few months of lactation.

What maternal daily dose should we use?
We talked about the 2 mg/kg total PCB limit set by the FDA with the 18 of fish/day intake rate suggested for the US population. There was some discussion about the percentage of total PCBs comprised by PCB-153. No decision was made about this daily dose.

Additional paramters:
PCBs stored in fat 90% - important for risk assessment model
PCBs absorbed 90% - important for risk assessment model

Additional considerations:
Risk assessment model assumes 50% decrease in PCB concentration (in milk-fat) over time